
UNIT 7 - PARACHUTE LANDING FALLS

RAM-AIR PARACHUTE
TRAINING MANUAL

BLM SMOKEJUMPERS

CHAPTER 7 - PARACHUTE LANDING FALLS

In this chapter, the student will be introduced to parachute landing falls. A properly done PLF minimizes the shock of landing by distributing the force of the landing throughout the entire body.

This unit is divided into three lessons: Parachute Landing Fall (PLF) Performance Standards, Class Demonstration and The Roll Simulator.

Lesson II and III should be presented together so that the students are practicing the kind of roll that was just previously demonstrated. The instructor should wait until the students have a firm grasp of the forward roll before demonstrating the side roll. Eventually the instructor demonstrations will end and the students should be completing rolls in any direction on demand.

CHAPTER OBJECTIVES

At the completion of this chapter the student must;

1. Accurately list verbally the three categories of the PLF evaluation criteria and identify the instructor responses associated with each evaluation.
2. Accurately describe verbally three reasons why doing a good PLF is important.
3. Accurately identify the five points of contact and proper procedures for doing PLFs off of the roll simulator.
4. Perform 6 PLFs with a category (1) evaluation; 1 in each of the six directions. forward (left and right), backwards (left and right), and directly to the right and left sides.

EQUIPMENT NEEDS

- 1ea.-. Copy of PLF Performance Standards for each student.
 - 1ea.-. Roll Simulator
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Lesson I PARACHUTE LANDING FALL (PLF) PERFORMANCE STANDARDS

Students will be given and explained the performance criteria used in evaluating their PLFs.

LESSON OBJECTIVE:

At the completion of this Lesson, the student must:

- **Verbally list the three categories of the PLF evaluation criteria.**
- **Identify the instructor responses associated with each evaluation.**

EQUIPMENT NEEDS:

of students X 1 ea. - copy of the PLF Performance Standards.

1. Performance Categories

The following three performance categories are intended to help students understand what is expected of them during PLF simulator training. It also serves to identify any trends that are deemed unacceptable and aid the student in correcting any of these problems.

- (1) **Satisfactory**--individual demonstrates good, tight body position; hits all 5 points of contact.
- (2) **Needs improvement**--individual erred in one of the components of the PLF; arm out, feet apart, missing one of the 5 points of contact.
- (3) **Unacceptable**--individual consistently makes mistakes; sticking arms out, poor body position, feet constantly apart; a feet, knees, head PLF would be a good example of what instructors would consider unacceptable.

2. Category Responses

- A category 2 evaluation would precipitate one-on-one counseling with an instructor, using video review to aid in correcting any mistakes, and a discussion of the error. Students having trouble with PLFs on the simulator would be taken to the ramp and "talked through" the correct technique by an instructor.

- A category **3** evaluation would be reviewed by the student and at least two instructors. If the individual is having difficulty with PLFs, the instructors will concentrate on the basic components of a correct PLF on the ground and work up to the simulator. However, if an individual establishes a pattern of unacceptable PLFs and this pattern continues it would be considered grounds for a washout.

3. Instructor Concerns

At this time PLF training may seem to be trivial; in reality it is **one of the most** important components of smokejumper training. A good jump ends with a good PLF. Mastering the PLF will prevent serious injury and prolong jump careers.

Lesson II CLASS DEMONSTRATION

Students will be introduced to the proper way to use the Roll Simulator and have demonstrated for them proper PLFs in all directions.

The parachute landing fall minimizes the shock of landing by distributing it throughout the entire body. Students are taught to do a PLF on every jump, no matter what the weather or the jump spot. Emphasis is placed on keeping feet and knees together, getting off the feet quickly, and keeping hands and arms tight against the body.

LESSON OBJECTIVE:

At the completion of this Lesson, the student must:

- **Accurately describe verbally three reasons why doing a good PLF is important.**
- **Accurately identify the three basic kinds of PLFs.**
- **Accurately identify the five points of contact and proper procedures for doing PLFs off of the roll simulator.**

EQUIPMENT NEEDS:

1ea.- PLF Roll Simulator.

OR

1ea.- ramp or table to jump from (3-4 feet tall)

1ea.- sawdust or gravel pit, or grass area to land on

1ea.- jump pants, jacket, and helmet for each student

Instructor will talk to the students about the PLF: why it is necessary, and the injuries that can result if not performed correctly. Students should be told again of the performance requirements for passing the unit test: acceptable rolls in six directions.

A. Parachute Landing Falls (PLFs)

1. There are three basic kinds of PLFs:
 - front (left, right)
 - side (left, right)
 - rear (left, right)

2. Why do a good PLF?
- Landing shock is spread throughout entire body.
 - PLFs done correctly can prevent injuries.
 - Doing bad PLFs is a habit that will hurt you eventually.

***A jumper should do good PLFs instinctively, every time.**

3. Preparation for landing:
- a. face into the wind
 - b. hands at half brakes
 - c. arms and elbows tucked in to sides
 - d. knees slightly bent
 - e. eyes at 45 degrees (don't look at ground beneath feet)
 - f. **DON'T TENSE UP**

4. The 5 points of contact:
- a. balls of feet
 - b. calves
 - c. thighs
 - d. butt
 - e. lats

5. Points to stress:
- Get over the instinct to stick arms out to break fall.
 - Keep feet and knees together.
 - Look where you want to roll.
 - **RELAX TO MAKE THE ROLL FLUID.**

B. Roll Demonstration

SHOULD BE PRESENTED TOGETHER WITH LESSON III OR DIRECTLY PRIOR TO LESSON III - ACTUAL ROLL SIMULATION.

1. Students wear jumpsuits with boots and helmets on. Harnesses should not be worn, to save wear and tear.
2. An instructor or other experienced jumper suits up and demonstrates a proper forward roll, describing acceptable technique, five points of contact, arm and leg position before and during the roll.

AT THIS POINT THE STUDENTS MAY ACTUALLY PRACTICE ROLLS ON THE GROUND.

THE INSTRUCTORS MAY EITHER HAVE THE STUDENTS MASTER ALL SIX KINDS OF ROLLS ON THE GROUND AT ONE TIME...AND THEN MOVE ON TO THE ROLL SIMULATOR

OR

HAVE THEM PRACTICE EACH KIND OF ROLL AS IT IS DEMONSTRATED BOTH ON THE GROUND AND OFF THE SIMULATOR BEFORE DEMONSTRATING THE NEXT KIND

1. When students have mastered forward rolls to both sides, instructor demonstrates backwards rolls to each side. Students perform backwards rolls until they're performing adequately.
2. Instructor demonstrates side rolls. Students line up and perform numerous rolls.
3. When students are performing acceptable side rolls, instructor can let them work on deficiencies or assign them random directions to roll in.

Lesson III ROLL SIMULATION

Students will perform Parachute Landing Falls. They will be evaluated based on the criteria presented in Lesson I of this unit.

The roll simulator reinforces what the students have already learned about PLFs. Students must perform a PLF with an evaluation of category (1) in each of the six directions before graduating to actual jump training.

LESSON OBJECTIVE:

- **At the completion of this Lesson, the student must perform 6 PLFs with a category (1) evaluation; one in each of the six directions.**

EQUIPMENT NEEDS:

1ea.- PLF Roll Simulator.

OR

1ea.- ramp or table to jump from (3-4 feet tall)

1ea.- sawdust or gravel pit, or grass area to land on

1ea.- jump pants, jacket, and helmet for each student

1ea.- video camera (optional)

A. Roll Simulator

1. The PLF roll simulator is used to prepare students for the high forward speed and descent rate of an actual parachute landing.
2. By the end of PLF training, students must be able to do good rolls in each of six directions: forward left and right, backwards left and right, and to the right and left sides.
3. Students wear jumpsuits with harnesses, boots, and helmets on.
4. An instructor or other experienced jumper suits up, climbs the simulator, and demonstrates proper forward rolls to each side.
5. The simulator should be set for gentle descents until students get the hang of the unit.
6. Student landings can be videotaped. Students having problems with rolls can benefit from watching video of their landings.

7. Students progress through sideways and backwards rolls.
8. Before passing the unit, students must demonstrate proper technique on landings in every direction: forwards right and left, sideways right and left, and backwards right and left.
9. Students should practice rolls on the ground before doing them off the platform. Students group up and roll to each side a number of times. When students are performing acceptable rolls on the ground, they can line up and do numerous forward PLFs to **both** sides off the platform. Instructors will observe and offer advice for correcting errors. A student with a recurrent problem can do repeated rolls until he catches on.
10. By the end of the first session, students should be demonstrating some mastery of basic rolls. Students will return with instructor to the practice area several times during unit training for further work.